

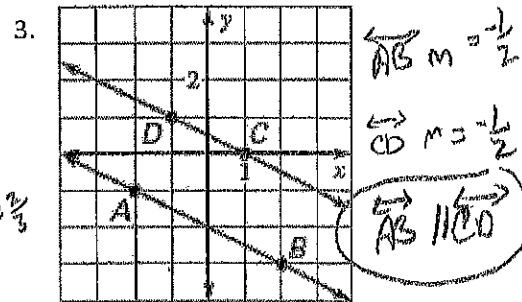
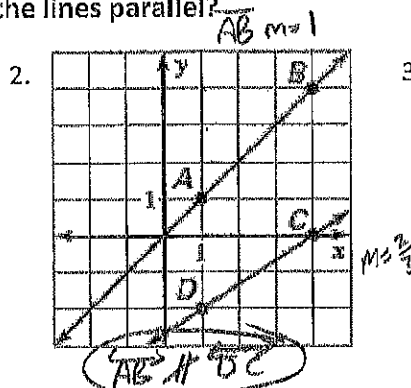
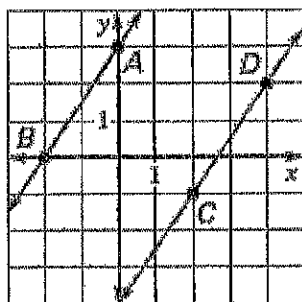
Name Key

Date _____

201 3.4 and 3.5 Extra Practice

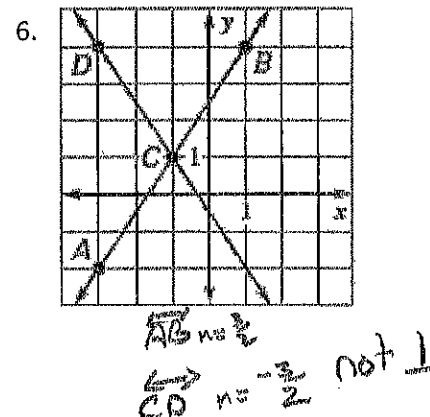
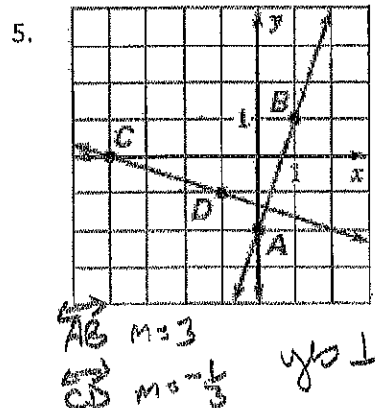
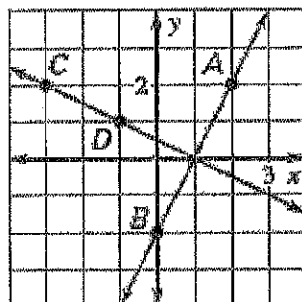
Find the slope of each line. Are the lines parallel?

1.
 $\overleftrightarrow{AB} \ m = \frac{3}{2}$
 $\overleftrightarrow{DC} \ m = \frac{3}{2}$
 $\overleftrightarrow{AB} \parallel \overleftrightarrow{DC}$



Find the slope of each line. Are the lines perpendicular?

4.
 $\overleftrightarrow{AB} \ m = 2$
 $\overleftrightarrow{CD} \ m = -\frac{1}{2}$
 $\overleftrightarrow{AB} \perp \overleftrightarrow{CD}$



Tell whether the lines through the given points are parallel, perpendicular, or neither.

7. Line 1: $(-1, 2), (2, 3)$ $m = \frac{1}{3}$
 Line 2: $(0, 0), (3, 1)$ $m = \frac{1}{3}$
 \parallel

8. Line 1: $(0, 1), (1, 3)$ $m = \frac{2}{1}$
 Line 2: $(4, -1), (5, 2)$ $m = \frac{3}{1}$
 neither

9. Line 1: $(-5, 0), (-3, -2)$ $m = \frac{-2}{2} = -1$
 Line 2: $(-2, 2), (0, 4)$ $m = \frac{2}{2} = 1$
 \perp

Tell whether the intersection of \overleftrightarrow{AB} and \overleftrightarrow{CD} forms a right angle.

10. $A(-8, 3)$, $B(1, 2)$, $C(0, 9)$, $D(-1, 0)$
 11. $A(3, 2)$, $B(5, 10)$, $C(7, -4)$, $D(3, -3)$
 12. $A(5, 4)$, $B(-3, 20)$, $C(9, -2)$, $D(6, 4)$

10 $\overleftrightarrow{AB} m = \frac{1}{9}$

$\overleftrightarrow{CD} m = \frac{9}{1}$

Yes forms R+L

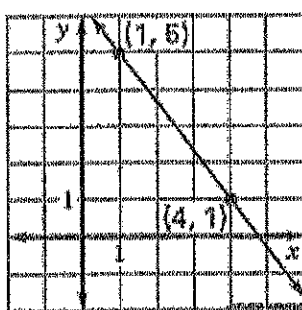
12 $\overleftrightarrow{AB} m = \frac{16}{-8} = -2$

$\overleftrightarrow{CD} m = \frac{6}{-3} = -2$

No

Write an equation of the line shown.

13.



$m = -\frac{4}{3}$

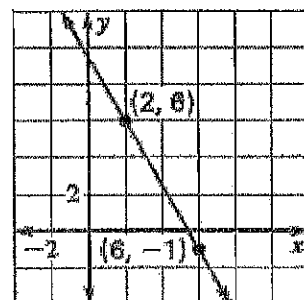
$y = -\frac{4}{3}x + b$

$5 = -\frac{4}{3}(1) + b$

$\frac{19}{3} = b$

$y = -\frac{4}{3}x + \frac{19}{3}$

14.



$m = -\frac{9}{4}$

$y = -\frac{9}{4}x + b$

$8 = -\frac{9}{4}(2) + b$

$\frac{19}{2} = b$

$y = -\frac{9}{4}x + \frac{19}{2}$

Write an equation of the line that passes through the given point P and has the given slope m .

15.

$P(3, 4)$; $m = 4$

$y = 4x + b$

$4 = 4(3) + b$

$y = 4x - 8$

16.

$P(5, -2)$; $m = -3$

$y = -3x + b$

$-2 = -3(5) + b$

$13 = b$

$y = -3x + 13$

17.

$P(-3, 2)$; $m = \frac{1}{3}$

$y = \frac{1}{3}x + b$

$2 = \frac{1}{3}(-3) + b$

$y = \frac{1}{3}x + 3$

Write an equation of the line that passes through point P and is parallel to the line with the given equation.

18. $P(6, -1)$; $y = 3x + \frac{3}{4}$

$-1 = 3(6) + b$

$-19 = b$

$y = 3x - 19$

19. $P(\frac{5}{8}, \frac{11}{4})$; $y = -\frac{6}{5}x + 4$

Put #19 in standard form.

$\frac{11}{4} = -\frac{6}{5}(\frac{5}{8}) + b$

$\frac{11}{4} + \frac{3}{4} = b$

$\frac{14}{4} = b$

$y = -\frac{6}{5}x + \frac{14}{4}$

$20y = -24x + 95$

$24x + 20y = 95$

Write an equation of the line that passes through point P and is perpendicular to the line with the given equation.

20. $P(-4, -4); y = -2x + 1$

$$m = \frac{1}{2}$$

$$-4 = \frac{1}{2}(-4) + b$$

$$-2 = b$$

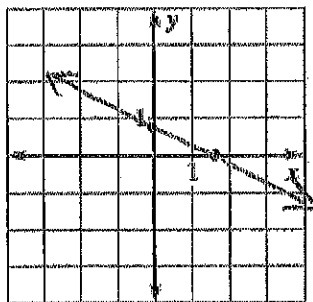
$$y = \frac{1}{2}x - 2$$

Graph the equation.

22. $2x + 4y = 3$

$$(0, \frac{3}{4})$$

$$(\frac{3}{2}, 0)$$



21. $P(2, -3); y = -4x - 5$

$$m = \frac{1}{4}$$

$$-3 = \frac{1}{4}(2) + b$$

$$-\frac{7}{2} = b$$

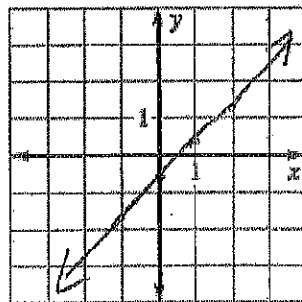
$$-3\frac{1}{2} = b$$

$$y = \frac{1}{4}x - 3\frac{1}{2}$$

23. $x + 3y = 4x - 2$

$$-3x + 3y = -2$$

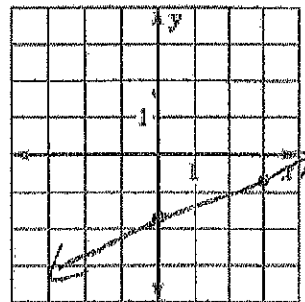
$$y = x - \frac{2}{3}$$



24. $x - 2y = y + 5$

$$x - 3y = 5$$

$$\frac{1}{3}x - \frac{5}{3} = y$$



25. $P(-2, 8)$ $Q(6, 6)$ \perp Bisector of \overline{PQ}

① Find midpoint $\frac{-2+6}{2}, \frac{8+6}{2}$

$$M(2, 7)$$

② Find slope

$$m = \frac{8-6}{-2-6} = \frac{2}{-8} = -\frac{1}{4} \quad \perp m = 4$$

③ $y - 7 = 4(x - 2)$
 $y - 7 = 4x - 8$
 $y = 4x - 1$